REMARKS

Claim Amendment

For consistency with claim 1, claim 13 has been amended to delete "ethylene-ethyl methacrylate copolymer" from the group of olefin-alkyl (meth)acrylate copolymers.

Provisional Double Patenting Rejection

Claims 1-8, 10, 11, 13-26, and 29-32 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 22, and 28-35 of copending U.S. Patent Application Publication No. US 2002/0169256 A1 to Merfeld et al. ("the '256 publication"). As Applicants' agent communicated to the Examiner in a teleconference on October 12, 2005, the application corresponding to the '256 publication was issued as U.S. Patent No. 6,878,782 ("the '782 patent") on April 12, 2005. Applicants' agent further explained that claims 1, 22, and 28-35 of the '782 patent are identical to the corresponding claims of the '256 publication except that claim 22 was rewritten in independent form. In that teleconference, the Examiner advised Applicants' agent to treat the rejection as a (nonprovisional) obviousness-type double patenting rejection. Accordingly, what follows is a response to a rejection of claims 1-8, 10, 11, 13-26, and 29-32 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 22, and 28-35 of the '782 patent.

For the convenience of the Examiner, claims 1, 22, and 28-35 of the '782 patent are reproduced below.

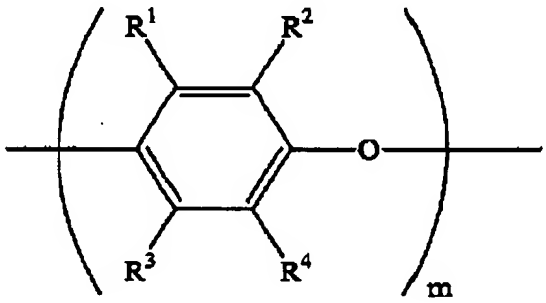
> 1. A curable composition, comprising: a functionalized poly(arylene ether); an alkenyl aromatic monomer; an acryloyl monomer; and a polymeric additive having a glass transition temperature less than or equal to 100°C and a Young's modulus less than or equal to 1000 megapascals at 25°C.; wherein the polymeric additive is soluble in the combined functionalized poly(arylene ether), alkenyl aromatic monomer, and acryloyl monomer at a temperature less than or equal to 50°C.
>
> 22. A curable composition, comprising: a functionalized poly(arylene ether); an alkenyl aromatic monomer; an acryloyl monomer; and a polymeric additive having a glass transition temperature less than or equal

to 100°C and a Young's modulus less than or equal to 1000 megapascals at 25°C; wherein the polymeric additive is soluble in the combined functionalized poly(arylene ether), alkenyl aromatic monomer, and acryloyl monomer at a temperature less than or equal to 50°C; and wherein the polymeric additive is a copolymer selected from the group consisting of ethylene-vinyl acetate copolymers, ethylene-ethyl acrylate copolymers, acrylonitrile-butadiene copolymers, methyl methacrylate-butadiene-styrene terpolymers, ethylacrylate-acrylonitrile copolymers, maleic anhydride-grafted polybutadienes, vinyl chloride-vinyl acetate-acrylic acid terpolymers, ethylene-vinyl acetate-acrylic acid terpolymers, and combinations comprising at least one of the foregoing copolymers.

28. The composition of Claim 1, wherein the functionalized poly(arylene ether) is a capped poly(arylene ether) having the structure

$Q(J\text{-}K)_y$

wherein Q is the residuum of a monohydric, dihydric, or polyhydric phenol; y is 1 to 100; J comprises repeating structural units having the formula



wherein R^1-R^4 are each independently selected from the group consisting of hydrogen, halogen, primary or secondary C_1-C_{12} alkyl, C_2-C_{12} alkenyl, C_2-C_{12} alkynyl, C_1-C_{12} aminoalkyl, C_1-C_{12} hydroxyalkyl, phenyl, C_1-C_{12} haloalkyl, C_1-C_{12} hydrocarbonoxy, and C_2-C_{12} halohydrocarbonoxy wherein at least two carbon atoms separate the halogen and oxygen atoms; m is 1 to about 200; and K is a capping group selected from the group consisting of

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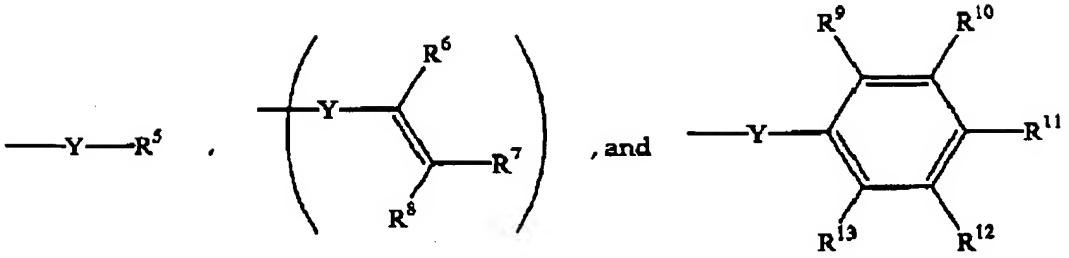
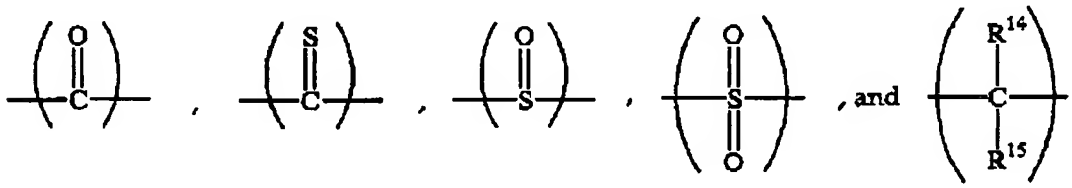


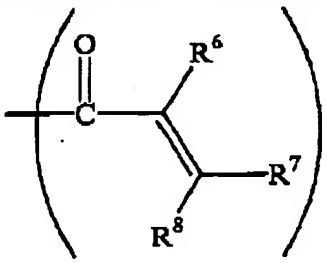
wherein R^5 is C_1-C_{12} alkyl; R^6-R^8 are each independently selected from the group consisting of hydrogen, C_1-C_{12} alkyl, C_2-C_{12} alkenyl, C_6-C_{18} aryl, C_7-C_{18} alkyl-substituted aryl, C_7-C_{18} aryl-substituted alkyl, C_2-C_{12} alkoxycarbonyl, C_7-C_{18} aryloxycarbonyl, C_8-C_{18} alkyl-substituted aryloxycarbonyl, C_8-C_{18} aryl-substituted alkoxycarbonyl, nitrile, formyl, carboxylate, imidate, and thiocarboxylate; R^9-R^{13} are each independently selected from the group consisting of hydrogen, halogen, C_1-C_{12} alkyl, hydroxy, and amino; and wherein Y is a divalent group selected from the group consisting of



wherein R^{14} and R^{15} are each independently selected from the group consisting of hydrogen and C_1-C_{12} alkyl.

29. The composition of claim 28, wherein Q is the residuum of a monohydric phenol.

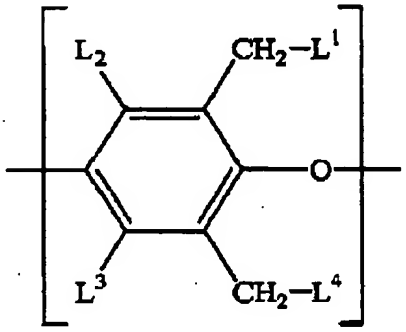
30. The composition of Claim 28, wherein the capped poly(arylene ether) comprises at least one capping group having the structure



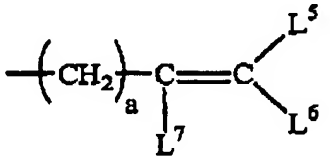
wherein R^6-R^8 are each independently selected from the group consisting of hydrogen, C_1-C_{12} alkyl, C_2-C_{12} alkenyl, C_6-C_{18} aryl, C_7-C_{18} alkyl-

substituted aryl, C_7-C_{18} aryl-substituted alkyl, C_2-C_{12} alkoxycarbonyl, C_7-C_{18} aryloxycarbonyl, C_8-C_{18} alkyl-substituted aryloxycarbonyl, C_8-C_{18} aryl-substituted alkoxycarbonyl, nitrile, formyl, carboxylate, imidate, and thiocarboxylate.

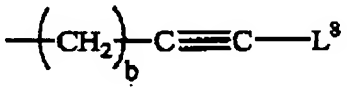
31. The composition of Claim 1, wherein the functionalized poly(arylene ether) is a ring-functionalized poly(arylene ether) comprising repeating structural units having the formula



wherein each L^1-L^4 is independently hydrogen, an alkenyl group, or an alkynyl group; wherein the alkenyl group is represented by



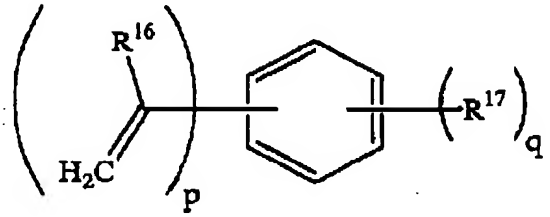
wherein L^5-L^7 are independently hydrogen or methyl, and a is an integer from 1 to 4; wherein the alkynyl group is represented by



wherein L^8 is hydrogen, methyl, or ethyl, and b is an integer from 1 to 4; and wherein about 0.02 mole percent to about 25 mole percent of the total L^1-L^4 substituents in the ring-functionalized poly(arylene ether) are alkenyl and/or alkynyl groups.

32. The composition of claim 1, comprising about 10 to about 90 parts by weight of the functionalized poly(arylene ether) per 100 parts by weight total of the functionalized poly(arylene ether), the alkenyl aromatic monomer, the acryloyl monomer, and the polymeric additive.

33. The composition of Claim 1, wherein the alkenyl aromatic monomer has the structure



wherein each R^{16} is independently selected from the group consisting of hydrogen, C_1-C_{12} alkyl, C_2-C_{12} alkenyl, C_2-C_{12} alkynyl, and C_6-C_{18} aryl; each R^{17} is independently selected from the group consisting of halogen, C_1-C_{12} alkyl, C_1-C_{12} alkoxyl, and C_6-C_{18} aryl; p is 1 to 4; and q is 0 to 5.

34. The composition of claim 1, wherein the alkenyl aromatic monomer comprises at least one alkenyl aromatic monomer selected from the group consisting of styrene, alpha-methylstyrene, 2-methylstyrene, 3-methylstyrene, 4-methylstyrene, 2-t-butylstyrene, 3-t-butylstyrene, 4-t-butylstyrene, 1,3-divinylbenzene, 1,4-divinylbenzene, 1,3-diisopropenylbenzene, 1,4-diisopropenylbenzene, styrenes having from 1 to 5 halogen substituents on the aromatic ring, and mixtures comprising at least one of the foregoing alkenyl aromatic monomers.

35. The composition of claim 1, comprising about 10 to about 90 parts by weight of the alkenyl aromatic monomer per 100 parts by weight total of the functionalized poly(arylene ether), the alkenyl aromatic monomer, the acryloyl monomer, and the polymeric additive.

The only aspect of these claims that is arguably related to Applicants' claim 1 "olefin-alkyl (meth)acrylate copolymer" is the claim 22 recitation of "ethylene-ethyl acrylate copolymers."

The Examiner has stated,

Although the conflicting claims are not identical, they are not patentably distinct from each other because the only difference is the instant claim 1 is the combination of claims 1 and 22 of the reference in that the ethylene ethyl acrylate copolymers in claim 22 is included in a polymeric additive in claim 1 of the reference.

Therefore, it would have been obvious to one of ordinary skill in the art to combine claims 1 and 22 of the reference to form at least claims 1 and seq.

> of the instant claims since they have been shown to be effective in a similar system and thus would have been expected to provide adequate results.

9/26/05 Office Action, pages 2-3. Applicants respectfully disagree.

Applicants respectfully assert that combining claims 1 and 22 of the '782 patent does not yield a composition within the scope of Applicants' claim 1. Claim 22 of the '782 patent recites "ethylene-ethyl acrylate copolymers." However, Applicants' claim 1 "olefin-alkyl (meth)acrylate copolymer" does not include "ethylene-ethyl acrylate copolymers." Note, in particular, that Applicants' claim 1 "olefin-alkyl (meth)acrylate copolymer is the polymerization product of (a) an olefin selected from ethylene and C_3-C_8 α-olefins, and (b) an alkyl (meth)acrylate, wherein the alkyl group is selected from methyl, propyl, n-butyl, n-pentyl, n-hexyl, n-heptyl, n-octyl", and it therefore does not include the "ethylene-ethyl acrylate copolymers" of '782 claim 22.

The cited claims of the reference therefore fail to teach Applicants' claim 1 "olefin-alkyl (meth)acrylate copolymer", and a prima facie case of obviousness against Applicants' claim 1 has not been established. Given that claims 2-8, 10, 11, 13-26, and 29-32 each include or further limit all the limitations of claim 1, Applicants respectfully request the reconsideration and withdrawal of the obviousness-type double patenting rejection over claims 1, 22, and 28-35 of the '782 patent.

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It is believed that the foregoing amendments and remarks fully comply with the Office Action and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and allowance is requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 50-1131 maintained by Assignee.

Respectfully submitted,

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